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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/791,659      | 03/02/2004  | Jason William Muller | FL/142              | 2699             |

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EXAMINER

PHAM, MINH CHAU THI

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

1724

DATE MAILED: 04/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/791,659

Applicant(s)

MULLER ET AL.

Examiner

Minh-Chau T. Pham

Art Unit

1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-57 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-57 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/12/06</u> . | 6) <input type="checkbox"/> Other: _____  |

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-17, 19, 21-36, 38-51 and 53-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Riedy et al (5,108,474), in view of Schultheiss et al (2003/0000389 A1).

Riedy et al discloses a composite filter material for removal of particles from a fluid stream (col. 1, lines 5-14) comprising a membrane filtration layer comprising a porous polymeric membrane (13, col. 5, lines 13-57), at least one depth filtration media layer comprising fibers (11, col. 3, line 45 through col. 4, line 5) disposed on the upstream side of the membrane filtration member (13) wherein the membrane filtration layer comprising ePTFE (col. 5, lines 48-50). The composite filter media further comprising a support layer disposed on the downstream side of the membrane filtration layer (col. 5, lines 58-61) wherein the support layer is laminated to the membrane filtration layer (col. 6, lines 26-34). Riedy et al also disclose the membrane filtration layer and the depth filtration media layers can be pleated (see col. 10, lines 46-67-). Riedy et al further disclose a composite filter comprising a frame (41), a composite filter media (11-13) wherein the composite filter material is sealed in the frame with a potting material wherein the potting material is selected from the group of silicone, polyurethane, plastisol or the like (col. 6, lines 26-34). Riedy et al also disclose various air permeability ratings via tests of the composite filter material (see the whole document). Claims 1-17, 19, 21-36, 38-51 and 53-56 differ from the disclosure of Riedy

et al in that the claims call for the depth filtration media comprising fibers having an electrostatic charge. Schultheiss et al disclose a multi-layered air filter wherein the filter media comprising electrostatic charge (page 1, paragraph 0014 and 0015). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide a filter layer with electrostatic charge as taught by Schultheiss et al in the filter apparatus of Riedy et al since it is very well-known in the art that electrostatic charge is put ahead of the filter layers for simultaneous increase of the suction efficiency stability and the separation performance (see page 1, paragraph 0014).

Claims 7-49 and 53 call for one additional depth filtration media layer. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide one or more layers of depth filtration media since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. St. Regis Paper Co. v. Bemis Co., 193 USPQ 8.

Claims 18, 20, 37, 52 and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over in view of Riedy et al (5,108,474), in view of Schultheiss et al (2003/0000389 A1), as applied supra, and further in view of Frey (5,522,908).

Claims 18, 20, 37, 52 and 57 call for the filtration media comprising a pattern of perforations wherein the media layer is removable by tearing at the perforations. Frey discloses the filtration media (10, 38, 44) comprising a pattern of perforations (60, 62, 64) wherein the media layer is removable by tearing at the perforations (col. 5, lines 58-64). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide perforations for tearing as taught by Frey in the filter

apparatus of Riedy et al and Schultheiss et al since the perforations would provide easy access for removing the filtration media off the filter frame.

***Response to Amendment***

Applicant's arguments filed on February 10, 2006 have been fully considered but they are not persuasive.

Applicant argues that none of the cited references discloses "a filter assembly with a membrane filtration layer and at least one depth filtration media layer disposed on the upstream side of the membrane filtration layer". The Examiner now drops George et al and newly introduces Riedy et al as the primary reference in combination with Schuttheiss et al as the secondary reference to show: Riedy et al discloses a composite filter material for removal of particles from a fluid stream (col. 1, lines 5-14) comprising a membrane filtration layer comprising a porous polymeric membrane (13, col. 5, lines 13-57), at least one depth filtration media layer comprising fibers (11, col. 3, line 45 through col. 4, line 5) disposed on the upstream side of the membrane filtration member (13) wherein the membrane filtration layer comprising ePTFE (col. 5, lines 48-50). The composite filter media further comprising a support layer disposed on the downstream side of the membrane filtration layer (col. 5, lines 58-61) wherein the support layer is laminated to the membrane filtration layer (col. 6, lines 26-34). Riedy et al also disclose the membrane filtration layer and the depth filtration media layers can be pleated (see col. 10, lines 46-67-). Riedy et al further disclose a composite filter comprising a frame (41), a composite filter media (11-13) wherein the composite filter material is sealed in the frame with a potting material wherein the potting material is

selected from the group of silicone, polyurethane, plastisol or the like (col. 6, lines 26-34). Riedy et al also disclose various air permeability ratings via tests of the composite filter material (see the whole document), as claimed. Claims 1-17, 19, 21-36, 38-51 and 53-56 differ from the disclosure of Riedy et al in that the claims call for the depth filtration media comprising fibers having an electrostatic charge. Schultheiss et al disclose a multi-layered air filter wherein the filter media comprising electrostatic charge (page 1, paragraph 0014 and 0015), as claimed. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide a filter layer with electrostatic charge as taught by Schultheiss et al in the filter apparatus of Riedy et al since it is very well-known in the art that electrostatic charge is put ahead of the filter layers for simultaneous increase of the suction efficiency stability and the separation performance (see page 1, paragraph 0014).

Applicant's arguments with respect to claims 1-57 have been thoroughly considered but are moot in view of the new ground(s) of rejection, as discussed above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh-Chau T. Pham whose telephone number is (571) 272-1163. The examiner can normally be reached on Mon/Tues/Thur/Fri 7:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**Minh-Chau Pham**  
**Patent Examiner**  
**Art Unit: 1724**  
**April 3, 2006**